Ord A-24-14 7:4	er ID 116814 46:46 AM		*116	3814*			j	P	Page 1
Item ID: Revision ID: Item Name:	D3407-1 Stem	, A	Accept	*N900	04010) *	Setup Sta	14'2 1	
Start Date: Required Date: Reference:	4/23/14 Start Qty: 40.00 : 4/23/14 Req'd Qty: 40.00	*40* *40*		Cust Item ?					
Approvals:	Process Plan: MLゴ QC:	•	Tooling: _ SPC (Y/N):		ate:	I	Run Sta Sto	"INH I	
Sequence ID/ Work Center I	Operation Description		Set Up/ Run Hours	Tool ID	Tool # Plan Code	Accept Qty	Reject Qty	Reject Insp Number Stan	
Draw Nbr D3407	Revision Nbr Rev E				,				DAS 40 9-89
100 *1	DOOSAN LATHE Memo		0.00	, V	7	40	Ø		/DAS 13 9-89
Doosan Lathe	1-Turn as p	er Folio FA596 Rev: 🛕 _ &	Dwg D3407 Rev: <u>と</u> / く ー				<u> </u>		DAS 40 9-89
110 *11	QC2- Inspect parts off r Memo	nachine FAI/FAIB	0.00	6/		<u>41</u>	<u>ø</u>		9 13
120 *1<i>2</i>0* QC	QC8- Inspect parts - sec	cond check	0.00			41	Ø		DAS 20 14-05-19 9-89
Quality Control						 			

DQA:		MAJ	Date:	4/05	116	_								
		V11		12 6	<u>-</u>	WORK ORDER NON	I-CC	NFO	RMANCE / UF				AEROSPACE	
QA Closed	: 0	<u> </u>	Date:	14/	$\bigcup \coprod$	\mathcal{L}				w	ork Order up	date only		
Work Order: 116814 DISPOSITION								AGAINST DEPARTMENT/PROCESS						
		,,0,	7			Rework	7		Skid-tube	Crosstube	1	Water Jet	Engineering	
Part	No.	D3Y	J7-1			Scrap]		Machining 🕻	Small Fab	Pro	Quality		
		λ	20	\sim		Use-as-is X		Therr	noforming	Finishing	Rec/Stor	re/Packaging	Other	
NCR	No.	14	X		<u> </u>	Suspected Unapproved]		Large Fab	Composite	J	Supplier		
Root					Desc	ription of work order update	1	nitial	Acti	ion	Sign &			
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Descr	iption	Date	Verification	QC Inspector	
Design					A 0	It's 15 at Attacker						DAS		
Doc/Data	Ш		·		KVIC	de la		DAS	Acceptable. No effect finichen /		DAS	27	DAS	
Equip/Toolin					yero	Mar Amhall Lair Web	ŀ	12 9-89	neceptore.		12	9-89	16	
Handling/Pre	<u> </u>				dec	INTERNATION OF THE STATE OF THE		9-89	AL CC V	617	9-89	MSIB	9-89	
Material	\downarrow				د دار	40	1 74	1/5/5	No estact	on sity	die	•	_	
Operator Offset/Setup	Н	14/05/09	100	2	15107	is off center.	1	44.	hirchen /	ah Mh	10/5/4		14/05/29	
Process			'		•	10075 Certer to currer			touch !	Strengin	'			
Supplier	\vdash				RC a	sprotn Erron			Delute €					
Training		i				1,1000,000			Merero -	o brochar		i		
Transport			ŀ						1	n brodran	4			
Unapproved														
							FA	ULT CA	TEGORY		·			
Lan	ding (Gear			_	General		1 .		_	7	_	–1	
	<u> </u>	Bending			<u> </u>	Bend	<u> </u>	1	Program	-	Outside Dim	<u> </u>	Pressure/Forced	
	<u> </u>	Centre No	ot Concer	ntric	<u> </u>	BOM/Route	<u> </u>	Grain		<u> </u>	Over/Under	 	Set-up	
	-	Cracks	1 /5: 1	4	<u> </u>	Broken/Damage/Defect	-	Hardw:			Part Incorre	 	Temperature/Cure	
Crimp/Kink/Ripple/Wave			<u> </u>	Burrs	\vdash	4 `	tion Incomplete/Ur	· -	Part Lost/Mi	· -	Weld			
Cuffs			-	Countamination	\vdash	4	tions Incomplete/l gned/off center	├	Part Moved Positioned V	_	Wrong Stock Pulled			
Crushing Heat Treat			Countersink Cut Too Short	\vdash	Mislab	•	H	Power Loss/		Other				
	-	Inspection		Tube	-	Drawing	-	Misrea		<u>i_</u>	Trower ross/	Juige _	Totalet	
	-	Marks/Ch	•	iube	 	Drill Holes	\vdash	Off-set						
	\vdash	Turning S				Finish	 	4	Calibration		***	<u></u>		
		Wave/Tw	-			Fit/Function		-	Sequence					

Work Order ID 116814 April-24-14 7:46:46 AM		*116814*									Page 2		
Item ID: Revision ID: Item Name:	D3407-1			Accept	*N900	040	100)*	Setup	Start Stop		S1* S2*	Ξ
Start Date: Required Date: Reference:	4/23/14 4/23/14	Start Qty: 40.00 Req'd Qty: 40.00		10* 10*	Cust Item 1 Customer:	ID:							
Approvals:	Process P	lan:	Date:	Tooling: SPC (Y/N):		ate:	_		Run	Start Stop	"17	R1* R2*	
Sequence ID/ Work Center II 130 *1.20*	D	Operation Description Identify as per dwg & Sto	ck Location:	Set Up/ Run Hours 0.00	Tool ID	Tool #	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp	- 12
Packaging Packaging		Memo		0.00				-41-	<u> </u>		_/	2	AS 26 -89
140 *1 4 1 * * OC Quality Control		QC21- Final Inspection -	Work Order Rele	0.00 0.00					_کـ	·^1	14-02	-13 MK 14-5-18	
												14-5-12)

DQA:			Date:									TRAGE		
QA Closed:			Date:			WORK ORDER NON-	-CC	ONFO	RMANCE / UPDATE	W	ork Order up	date only	AEROSPACE	
Work Orde	or.					DISPOSITION	DISPOSITION AGAINST D			T DE	DEPARTMENT/PROCESS			
Work Order.			_	Rework	Rework Skid-tube Crosstube			٦	Water Jet Engineering					
Part N	J۸					Scrap		ı	Machining Small Fal	<u> </u>	l Pro	d. Eng. Coor.	Quality	
· uici	••••				_	Use-as-is	l		noforming Finishin	-	1	re/Packaging	Other	
NCR No.			_	Suspected Unapproved		Large Fab Composit			j '	Supplier				
Root		,			Desci	ription of work order update	1	nitial	Action		Sign &			
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector	
Design														
Doc/Data														
Equip/Tooling				· i										
Handling/Pre														
Material	Ш		1											
Operator														
Offset/Setup						,								
Process														
Supplier			<u> </u>											
Training														
Transport														
Unapproved														
							FA	ULT CA	TEGORY				*	
Landi		I			_	General	_	1 .			7	Г	¬	
		Bending			<u> </u>	Bend		1	Program	\perp	Outside Dim	⊢	Pressure/Forced	
		Centre No	ot Conce	ntric		BOM/Route		Grain		L	Over/Under	├ ~	Set-up	
		Cracks				Broken/Damage/Defect	匚	Hardwa		L	Part Incorre	_	Temperature/Cure	
		Crimp/Kir	nk/Ripple	/Wave	_	Burrs		Inspect	ion Incomplete/Unqualified	L	Part Lost/M	· ·	Weld	
	<u> </u>	Cuffs				Contamination		4	tions Incomplete/Unclear		Part Moved		Wrong Stock Pulled	
	Ĺ	Crushing				Countersink		1	gned/off center	<u> </u>	Positioned V		_	
		Heat Trea	at			Cut Too Short		Mislabe	eled	L	Power Loss/	'Surge	Other	
		Inspectio	n Strip in	Tube		Drawing		Misrea	d					
		Marks/Ct	natter			Drill Holes		Off-set						
	$oxed{oxed}$	Turning S	equence			Finish		Out of	Calibration			-		
	1	Wave/Tw	ist in Tul	эе		Fit/Function		Out of	Sequence					

Picklist Print Page 1 April-24-14 7:46:50 AM Work Order ID: 116814 *116814* *D3407-1* Parent Item: D3407-1 Parent Item Name: Stem Required Date: 4/23/14 **Start Date:** 4/23/14 **Start Oty: 40.00** Required Otv: 40.00 **Comments:** IPP Rev:A05.10.18New issueKJ/EC IPP Rev:B Now on Doosan 08-05-14 JLM Verified By:DD IPP Rev:C 08-08-12 revE as per dwg (ecn 08-507) DD verified by:EC Component Item ID/ Replacement Mfg/ Oty per Kit Total Bin Primary Last Route Unit of Oty on Otv Date Status **Item Name** Item ID Purch Item Location Location Seq ID Measure Hand Issued **Issued Qty** M174R0.750 No 100 f 36.5000 0.459 Purchased 19.32632 ** 14-5-6

M174R0 750

17-4 round bar .750

Location Loc Qty Loc Code MAT030 36.5 ____ m127647 36.5

DQA:			Date:										TRAGE
OA Classid			Date:			WORK ORDER NON-	-CC	ONFO	RMANCE / UPDATE	147	ork Order up	data anly	AEROSPACE
QA Closed:			Date.				— т			VV	Jik Order up	date only	1
Work Orde	er:					DISPOSITION		AGAINST DEPARTMENT/PROCESS					
			_	Rework	Rework		Skid-tube Crosst		Water Jet	Engineering			
Part N	lo.					Scrap		Machining Small			Pro	d. Eng. Coor.	Quality
	•		•			Use-as-is		Thern	noforming Finisl	hing	Rec/Stor	e/Packaging	Other
NCR N	NCR No.			Suspected Unapproved			Large Fab Compo	site		Supplier	J ∐		
Root					Desc	ription of work order update		nitial	Action		Sign &	· · · · · ·	
Cause		Date	Step	Qty		or non-conformance	1	ief Eng	Description		Date	Verification	QC Inspector
Design													
Doc/Data													
Equip/Tooling				ļ									
Handling/Pre		·	1										
Material													
Operator													
Offset/Setup													
Process				ļ									
Supplier		!										-	
Training							1			*			
Transport			1										
Unapproved													
							FA	ULT CA	regory				
Landi		3			_	General		1		_	7		7- /-
	_	Bending	_		_	Bend	_	1	Program		Outside Dim	<u> </u>	Pressure/Forced
		Centre No	ot Concer	ntric	-	BOM/Route	\vdash	Grain		\vdash	Over/Under	_	Set-up
	<u> </u>	Cracks			-	Broken/Damage/Defect	\vdash	Hardwa		-	Part Incorred	· -	Temperature/Cure
	\vdash	Crimp/Kir	nk/Ripple	e/Wave	\vdash	Burrs	\vdash	1 '	ion Incomplete/Unqualified	-	Part Lost/Mi		Weld
		Cuffs			-	Countaries	-	₹	tions Incomplete/Unclear		Part Moved Positioned V		Wrong Stock Pulled
	\vdash	Crushing	.+		-	Countersink Cut Too Short	\vdash	Mislabe	gned/off center	<u> </u>	Positioned v		Other
	\vdash	Heat Trea		Tubo	_	╡ .	-	Misrea		L	7. OMEL 1022)	Juige L	Other
	\vdash	Inspectio Marks/Ch		iube	-	Drawing Drill Holes	-	Off-set					
	-	Turning S		,	\vdash	Finish	\vdash	4	Calibration				
	\vdash	Wave/Tw	•		H	Fit/Function	\vdash	4	Sequence				
1	1	1			- 1	1	1	1					(9)

DART AEROSPACE LTD	Work Order:	116814
Description: Tow Ring	Part Number:	D3407-1
Inspection Dwg: D3407 Rev: E		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.063	+/-0.010	073		۴	Ven	P10-12
1/4-28 UNF	Max: 0.2668 Min: 0.2635	. 2667			Mic	20-02
Major Ø	Max: 0.249 Min: 0.2425	.2463			11	į t
Ø0.625	+/-0.010	.629	,/		VERN	Ata-12
Ø0.363	+/-0.010	.366			iv.	1.
Ø0.750	+/-0.010	.750			11	**
R0.100	+/-0.010	100			Rad G	
0.470	+/-0.010	.470			VERU	140-12
0.500	+/-0.010	.504	/		11	••
3.250	+/-0.010	3 243			1-	٠ '
4.250	+0.000/-0.010	4, 245	V		t.	÷ ¢
5.270	+/-0.010	3,271			,	
0.150	+/-0.010	.150	/			
0.550	+/-0.010	£22°				
0.625	+/-0.010	620				
0.250	+0.010/-0.000					
						·

DAS

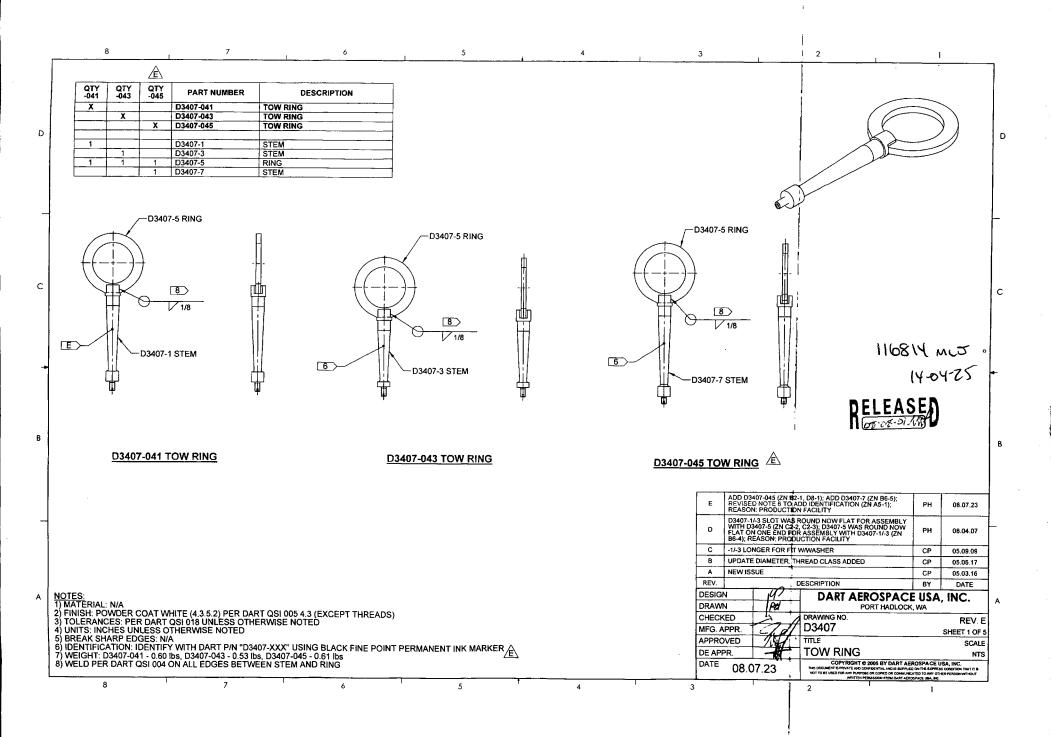
Measured by: 40
Date: 14-05-13

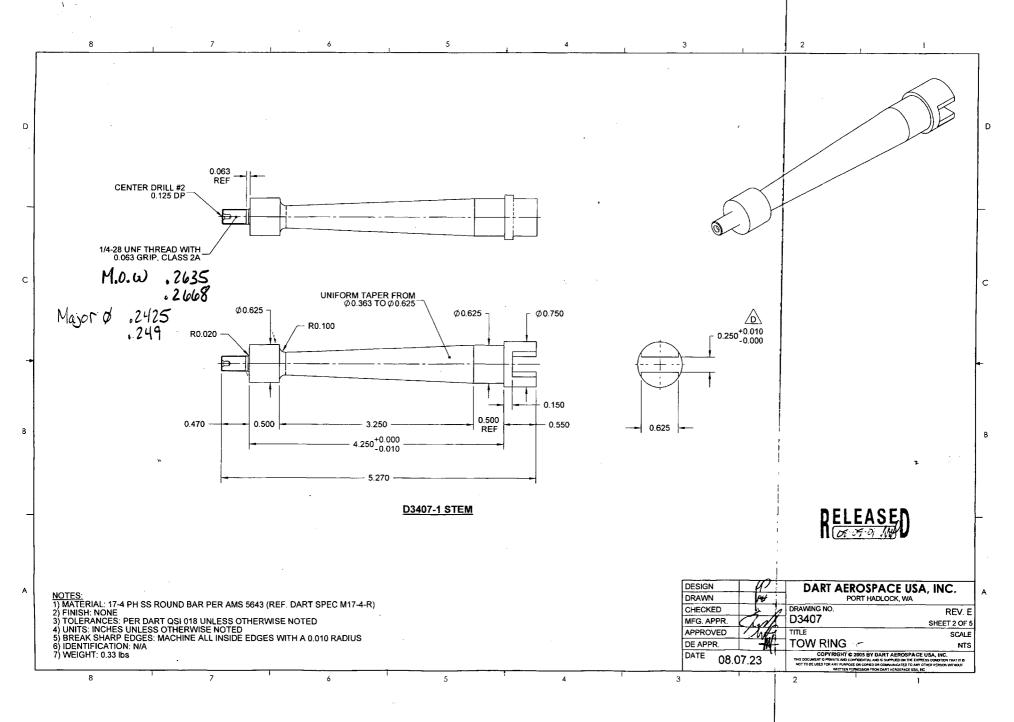
DAS

Audited by: 20
Prototype Approval: N/A

Date: N/A

Rev	Date	Chánge	Revised by	Approved
_ A	06.09.19	New Issue	KJ/JLM	
В	07.07.18	Tolerances for diameters updated per Machinists	KJ/JLM	
С	08.05.14	Dimensions updated per Dwg Rev D	KJ/JLM LA	
D	08.10.07	Dimensions updated per Dwg Rev E	KJ/DD 🚓	D
			· · · · · · · · · · · · · · · · · · ·	





4.247

